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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ART UNIT				
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DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/531,501	CATHELIN, PHILIPPE
Examiner	Art Unit	
Junpeng Chen	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10 April 2006.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-30 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 13 April 2005 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/05/2006</u>	5) <input type="checkbox"/> Notice of Informal Patent Application
	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1 and 25** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Consider **claim 1 and 25**, each of claim 1 and claim 25 recites a phrase “a radio frequency device of the type” renders the claims indefinite because the addition of the word “type” to an otherwise definite expression (e.g., radio frequency device) extends the scope of the expression so as to render it indefinite (*Ex parte Copenhaver*, 109 USPQ 118 (Bd. App. 1955)). See MPEP § 2173.05(b).

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 9-12 and 14-24** are rejected under 35 U.S.C. 102(e) as being anticipated by Vaucher C et al: "A wide-band tuning system for fully integrated satellite receivers" IEEE Inc. New York, US, Vol. 33, no. 7, 07-1998, pages 987-997.

Consider claim 9, Vaucher C et al., discloses a local oscillator, comprising:

a first phase lock loop receiving a first reference signal and incorporating a first voltage controlled oscillator which generates a second reference signal (read as REF DIV M outputs a signal into PFD/CP2 and VHF VCO in loop 2 generates a signal to PFD/CP1 in loop1, Figure 3, description of Figure 3, page 989); and

a second phase lock loop receiving the second reference signal and incorporating a second voltage controlled oscillator which generates a local oscillator output signal (read as PFD/CP1 in loop 1 receives the signal from VHF VCO in loop 2 and incorporates with RC VCO to generate I and Q signal, Figure 3, description of Figure 3, page 989).

Consider claim 10, as applied to claim 9 above, Vaucher C et al., further discloses that wherein the second reference signal has a frequency that is less than a frequency of the local oscillator output signal (read the frequency of the output of VHF VCO is between 237-307 MHz, and is less than the frequency of the RC VCO, which can be up to 3.2 GHz maximum input frequency of multimodulus presaler in loop 1, Figure 3, abstract, first column of page 989), and the first reference signal has a frequency that is less than the second reference signal frequency (read as the reference frequency of loop 2 could be 142.85kHz, which is less than the output frequency of RC

VCO that is between 237-307 MHz, Figures 3 and 4, description of Figures 3 and 4, page 989).

Consider claim 11, as applied to claim 10 above, Vaucher C et al., discloses wherein the second reference signal frequency is greater than N times the first reference signal (*read as 237 MHz is greater than 1428.5kHz, where 1428.5kHz equals to 142.85Khz times 10, Figures 3 and 4, description of Figures 3 and 4, page 989*).

Consider claim 12, as applied to claim 11 above, Vaucher C et al., discloses wherein N equals ten (*read as 237 MHz is greater than 1428.5kHz, where 1428.5kHz equals to 142.85Khz times 10, Figures 3 and 4, description of Figures 3 and 4, page 989*).

Consider claim 14 and claim 15, as applied to claim 11 above, Vaucher C et al., discloses wherein the second reference signal frequency is in a non-contaminated zone with respect to the local oscillator output signal frequency as in claim 14 and wherein the non-contaminated zone is frequency which are not harmonics or mixes of useful signals as in claim 15 (*read as loop 2 has relatively low reference frequency, the signal originated from loop 2 will be "in band", last paragraph of the first column in page 990*).

Consider claim 16 and claim 17, as applied to claim 11 above, Vaucher C et al., discloses wherein the second reference signal frequency is greater than 1/M of the local oscillator output signal frequency as in claim 16 and wherein M is twenty (*read as 237MHz is greater than 160MHz, where 160MHz equals to 3.2GHz divided by 20, Figures 3 and 4, abstract, description of Figures 3 and 4, page 989*).

Consider claim 18, as applied to claim 11 above, Vaucher C et al., discloses wherein the second reference signal frequency is large enough to sharply reduce an effect of pulling as to the second voltage controlled oscillator (read as reference frequency of loop 1, which is the output frequency of VHF VCO, is between 230MHz and greater than 1MHz, which is typically large enough to sharply reduce the effect of pulling as to the RC VCO, paragraph [58] of current application).

Consider **claim 19**, Vaucher C et al. discloses a frequency synthesizer, comprising:

A double phase locked loop circuit wherein a first phase locked loop outputs a reference signal to a second phase locked loop which produces an output signal, the double phase locked loops operating at different frequencies with the reference signal output by the first phase locked loop having a frequency selected to reduce an effect of voltage controlled oscillator pulling within the second phase locked loop (read as loop 2 outputs a reference signal to loop 1, loop 2 could be operating with reference frequency 142.85kHz to make loop 1 operate with reference frequency between 237-307 MHz, which is typically large enough to sharply reduce the effect of pulling as to the RC VCO as mentioned in paragraph [58] of current application, Figures 3 and 4, description of Figures 3 and 4, page 989).

Consider **claim 20 and claim 21, as applied to claim 19 above**, Vaucher C et al. discloses wherein the reference signal frequency is not perturbed a frequency of use for the output signal as in claim 20 and wherein the reference signal frequency is not

harmonic of the frequency of use of the output signal as in claim 21 ((read as loop 2 has relatively low reference frequency, the signal originated from loop 2 will be "in band", last paragraph of the first column in page 990).

Consider **claim 22 and claim 23, as applied to claim 19 above**, Vaucher C et al. discloses wherein the reference signal frequency is a fraction of a frequency of the reference signal output as in claim 22 and wherein the fraction is twentieth as in claim 23 (read as 237MHz is greater than 160MHz, where 160MHz equals to 3.2GHz divided by 20, where 3.2GHz is the maximum input frequency of multimodulus presaler in loop 1 is up to 3.2 GHz and this input is from RC VCO, Figures 3 and 4, abstract, description of Figures 3 and 4, page 989).

Consider **claim 24, as applied to claim 19 above**, Vaucher C et al. discloses wherein the first phase lock loop receives an auxiliary reference signal having a frequency which is less than the reference signal frequency (read as 142.85kHz, the reference frequency of loop 2, is less than 237MHz, a possible frequency of the output of VHF VCO, which is the reference frequency of loop 1, Figures 3 and 4, description of Figures 3 and 4, page 989).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-8, 13 and 25-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Vaucher C et al: "A wide-band tuning system for fully integrated satellite receivers" IEEE Inc. New York, US, Vol. 33, no. 7, 07-1998, pages 987-997.

Consider **claim 1**, Vaucher C et al. discloses a radio frequency device with null intermediate frequency, intended to receive or transmit radio frequency signal whereof transmit and receive frequency is part of a frequency range subdivided into frequency channels (read as the wide-band satellite receiver with direct conversion, Figures 2b and 3, corresponding descriptions of Figures 2b and 3), wherein it comprise on the same electronic chip frequency transposition means (read as the mixers that mixes I and Q signal with RFin signal, Figure 3) connected to a local main oscillator, and in that a main oscillator is incorporated inside a main phase locked loop (read as RC VCO inside loop1, Figure 3) whereof a reference frequency is supplied by a voltage-controlled auxiliary oscillator, itself incorporated into an auxiliary phase locked loop (read as VHF VCO supplies reference signal to PFD/CP1 in loop 1, and VHF VCO is in loop 2, Figure 3) whereof the reference frequency (read as reference frequency of loop

2 could be around 142.85 kHz) is less than the frequency of the auxiliary oscillator (read as the frequency at output of VHF VCO could be 237-307 MHz), in that the reference frequency of the main loop (read as the frequency at output of VHF VCO could be 237-307 MHz) is less than the output frequency of the main oscillator (read as maximum input frequency of multimodulus presaler in loop 1 is up to 3.2 GHz and this input is from RC VCO, Figure 3, abstract, first column of page 989), and removed by a whole multiple of the transmit or receive frequency of at least the cut-off frequency of the main loop (*read as the signal goes into the multimodulus prescaler program divider Nband in loop 1, which the division ratio of prescaler Nband is switchable between integers, for example, Nband divider=7, and then the signal would pass into loop filter in loop 1 that has its own cut-off frequency, Figure 3, last paragraph in the first column and the last paragraphs in the second column, page 989*).

However, Vaucher C et al. discloses the above limitations and that a multimodulus prescaler program divider Nband in loop 1, which the division ratio of prescaler Nband is switchable, for example, Nband divider=7, but fails to specifically disclose that the reference frequency of the main loop is greater than 10 times the frequency spacing of the channels reduced to the output frequency.

Nonetheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the reference frequency of loop 1 to be greater than 10 times the frequency spacing of the channels reduced to the output frequency because the division ratio of presaler Nband in loop 1 is switchable and, since it has

been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Consider **claim 2, as applied to claim 1 above**, Vaucher C et al. discloses wherein the auxiliary loop comprises a whole divider (read as MAIN DIV N in loop 2) but fails specifically discloses that the reference frequency of the auxiliary loop is less than or equal to, preferably equal to, the frequency spacing of the channels reduced to the reference frequency of the main loop.

Nonetheless, it would have been an obvious matter of design choice to have the reference frequency of the auxiliary loop to be less than or equal to, preferably equal to, the frequency spacing of the channels reduced to the reference frequency of the main loop, since the applicant has not discloses that having reference frequency of the auxiliary loop to be less than or equal to, preferably equal to the, the frequency spacing of the channels reduced to the reference frequency of the main loop solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well without above limitation.

Consider **claim 3, as applied to claim 1 above**, Vaucher C et al. discloses wherein the reference frequency of the main loop is greater than a twentieth of the output frequency of the main oscillator (read as maximum output for RC VCO is 3.2GHz,  $3.2\text{GHz}/20 = 160\text{Mhz}$ , which is less than 237-307Mhz, the frequency range of the VHF VCO output, as well as the frequency range of the reference frequency range the main loop).

Consider **claim 4, as applied to claim 1 above**, Vaucher C et al. discloses wherein the range of frequencies to which the send or receive frequency belongs is in the vicinity of 1800Mhz (read as the receiver's input frequency range is 950-2150 Mhz, Figure 3, first column of page 989) but fails to specifically discloses that the reference frequency of the main loop can be take as equal to 450 Mhz, whereas the reference frequency of the auxiliary loop can be equal to 50 kHz.

Nonetheless, it would have been an obvious matter of design choice to have the reference frequency of the main loop can be take as equal to 450 Mhz, whereas the reference frequency of the auxiliary loop can be equal to 50 kHz since the applicant has not discloses that having the reference frequency of the main loop can be take as equal to 450 Mhz, whereas the reference frequency of the auxiliary loop can be equal to 50 kHz solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well without above limitation.

Consider **claim 5 and claim 6, as applied to claim 1 above**, Vaucher C et al. discloses wherein the electronic chip also comprises the two phase locked loops as in claim 5 and it is integrally produced on said electronic chip as in claim 6 (read as the receiver comprise loop 1 and loop 2 and it is fully integrated satellite receiver, Figure 3, description of Figure 3, first column of 989 to second column of 989).

Consider **claim 7 and claim 8, as applied to claim 1 above**, Vaucher C et al., disclose a component of a wireless communication system wherein it incorporates a device as claimed in claim 1 as in claim 7 and the component forms a cellular mobile telephone as in claim 8 (read as Vaucher C et al. suggested that the above claim

receiver circuit would be used in cellular and cordless communications, second paragraph of introduction, page 987).

Consider **claim 13, as applied to claim 11 above**, Vaucher C et al. discloses the claimed invention above but fails to discloses wherein the second reference signal frequency is less than or substantially equal to frequency spacing between communication frequency channels as reduced to the second reference signal frequency.

Nonetheless, it would have been an obvious matter of design choice to have the second reference signal frequency is less than or substantially equal to frequency spacing between communication frequency channels as reduced to the second reference signal frequency, since the applicant has not discloses that having the second reference signal frequency is less than or substantially equal to frequency spacing between communication frequency channels as reduced to the second reference signal frequency solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well without above limitation.

Consider **claim 25**, Vaucher C et al. discloses a radio frequency device with a null or quasi-null intermediate frequency, intended to receive a transmit a radio frequency signal having a frequency that is part of a frequency range subdivided into frequency channels (read as the wide-band satellite receiver with direct conversion, Figures 2b and 3, corresponding descriptions of Figures 2b and 3), comprising;

a frequency transposition mixer (read as the mixers that mixes I and Q signal with RF in signal, Figure 3);

a local main oscillator connected to the mixer (read as RC VCO, Figure 3);

a main phase locked loop incorporating the main oscillator receiving a first reference frequency (read as loop 1 receives reference signal from loop 2, Figure 3);

a voltage-controlled auxiliary oscillator supplying the first reference frequency (read as VHF VCO in loop 2, Figure 3); and

an auxiliary phase locked loop incorporating the voltage controlled auxiliary oscillator receiving a second reference frequency (read as loop 2 has reference signal from REF DIV M, Figure 3);

wherein the second reference frequency is less than the first reference frequency (read as 142.85kHz, the reference frequency of loop 2, is less than 237MHz, a possible frequency of the output of VHF VCO, which is the reference frequency of loop 1, Figures 3 and 4, description of Figures 3 and 4, page 989); and

wherein the first reference frequency is less than an output frequency of the local main oscillator (read as maximum input frequency of multimodulus presaler in loop 1 is up to 3.2 GHz and this input is from RC VCO, Figure 3, abstract, first column of page 989), and is removed by whole multiple of the frequency for the radio frequency signal of at least the cut-off frequency of the main loop (read as *the signal goes into the multimodulus prescaler program divider Nband in loop 1, which the division ratio of prescaler Nband is switchable between integers, for example, Nband divider=7, and then the signal would pass into loop filter in loop 1 that has its own cut-off frequency*,

*Figure 3, last paragraph in the first column and the last paragraphs in the second column, page 989).*

However, Vaucher C et al. discloses the above limitations and that a multimodulus prescaler program divider Nband in loop 1, which the division ratio of prescaler Nband is switchable, for example, Nband divider=7, but fails to specifically disclose that the reference frequency of the local main oscillator is greater than 10 times the frequency spacing of the channels reduced to the output frequency of the main oscillator.

Nonetheless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the reference frequency of loop1 to be greater than 10 times the frequency spacing of the channels reduced to the output frequency because the division ratio of presaler Nband in loop 1 is switchable and, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Consider **claim 26, as applied to claim 25 above**, Vaucher C et al. discloses wherein the auxiliary phase locked loop comprises a whole divider (read as MAIN DIV N in loop 2) but fails specifically discloses that the second reference frequency of the auxiliary loop is less than or equal to the spacing of the frequency channels reduced to the first reference frequency.

Nonetheless, it would have been an obvious matter of design choice to have the reference frequency of the auxiliary loop to be less than or equal to, preferably equal to, the frequency spacing of the channels reduced to the reference frequency of the main

loop, since the applicant has not discloses that having reference frequency of the auxiliary loop to be less than or equal to, preferably equal to the, the frequency spacing of the channels reduced to the reference frequency of the main loop solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well without above limitation.

**Consider claim 27, as applied to claim 25 above,** Vaucher C et al. discloses the first reference frequency of the main phase locked loop is greater than a twentieth of the output frequency of the local main oscillator (read as 237MHz is greater than 160MHz, where 160MHz equals to 3.2GHz divided by 20, where 3.2GHz is the maximum input frequency of multimodulus presaler in loop 1 is up to 3.2 GHz and this input is from RC VCO, Figures 3 and 4, abstract, description of Figures 3 and 4, page 989).

**Consider claim 28, as applied to claim 25 above,** Vaucher C et al. wherein the range of frequency to which the frequency of the main oscillator belongs is in the vicinity of 900 MHz or 1800 MHz, the first reference frequency is about 450 MHz, and the second reference frequency is about 50 kHz.

Nonetheless, it would have been an obvious matter of design choice to have the reference frequency of the main loop can be take as equal to 450 Mhz, whereas the reference frequency of the auxiliary loop can be equal to 50 kHz since the applicant has not discloses that having the reference frequency of the main loop can be take as equal to 450 Mhz, whereas the reference frequency of the auxiliary loop can be equal to 50

kHz solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well without above limitation.

Consider **claim 29** and **claim 30**, as applied to **claim 25 above**, Vaucher C et al. further discloses wherein the device is fabricated as an integrated circuit chip as in claim 29 and wherein it is integrally produced on said electronic chip (read as the receiver comprise loop 1 and loop 2 and it is fully integrated satellite receiver, Figure 3, description of Figure 3, first column of 989 to second column of 989).

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Holland; William Eric et al.	US 6946884 B2	Fractional-N baseband frequency synthesizer in bluetooth applications
Gore; Charles et al.	US 6484038 B1	Method and apparatus for generating a plurality of reference frequencies in a mobile phone using a common crystal reference oscillator
Gore; Charles et al.	US 6308048 B1	Simplified reference frequency distribution in a mobile phone
Boesch; Ronald D. et al.	US 6125268 A	Tuning bandwidth minimization for low voltage dual band receiver
Dolman; Rodney Allen	US 6009312 A	Transmit signal generation with the aid of a receiver
Heinonen; Jarmo	US 5896562 A	Transmitter/receiver for transmitting and receiving of an RF signal in two frequency bands

Dent; Paul W.	US 5610559 A	Dual loop frequency synthesizer having fractional dividers
Dent; Paul W.	US 5535432 A	Dual-mode satellite/cellular phone with a frequency synthesizer
Dent; Paul W.	US 5180993 A	Method and arrangement for frequency synthesis
Dent; Paul W.	US 5095288 A	Phase-locked loop having a variable bandwidth

6. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Junpeng Chen whose telephone number is (571) 270-1112. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Junpeng Chen  
J.C./jc

October 12, 2006

EDAN ORGAD  
PATENT EXAMINER/TELECOMM.

*edan orgad 10/23/06*